

created doctrine of obviousness-type double patenting over claims 1 - 9 of BENTELE et al. (U.S. Patent No. 5,788,817) [hereinafter "BENTELE"]. The Examiner asserts that the feature related to a changeable pressure differential occurring is a process limitation which has not been accorded patentable weight.

By the present amendment, independent claim 1 has been amended to structurally define the features of the instant invention. In particular, independent claim 1 recites, *inter alia*, a pressure fluid line arranged to generate internal pressures by the at least one first support element on the flexible press belt of the shoe press unit and by the at least one second support element on the roll jacket of the counter roll, and an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll. Moreover, Applicants submit that independent claim 33 recites, *inter alia*, adjusting a pressure differential between internal pressures generated by the at least one first support element acting on the flexible press belt, and the at least one second support element acting on the roll jacket, where the pressure differential is adjusted by adjusting the pressure of the fluid supplied to the at least one first support unit and the at least one second support unit.

Applicants submit that BENTELE fails to claim the above-noted features of the instant invention, and, moreover, fails to disclose or suggest such features. Thus, Applicants submit that the claims of the instant application are patentably distinct from the claims of BENTELE.

Accordingly, Applicants request that the Examiner reconsider and withdraw the obviousness-type double patenting rejection over claims 1 - 9 of BENTELE and indicate that these claims are

patentably define over BENTELE.

2. Over Bentele in view of Smook

Applicants traverse the rejection of claim 25 based upon the judicially created doctrine of obviousness-type double patenting over claims 1 - 9 of BENTELE in view of SMOOK (*Handbook for Pulp & Paper Technologists, 2nd ed.*).

Applicants note that neither BENTELE nor SMOOK disclose or suggest the above-noted structural features recited in independent claim 1, as now amended. As such, Applicants submit that claim 25 is patentably defined over any proper combination of claims 1 - 9 of BENTELE with the disclosures of BENTELE and SMOOK.

Accordingly, Applicants request that the Examiner reconsider and withdraw the obviousness-type double patenting rejection over claims 1 - 9 of BENTELE in view of SMOOK and indicate that these claims are patentably defined over the applied documents.

Traversal of Rejection Under 35 U.S.C. § 103(a)

1. Over Bentele

Applicants traverse the rejection of claims 1 - 24 and 26 - 33 under 35 U.S.C. § 103(a) as being unpatentable over BENTELE et al. (U.S. Patent No. 5,788,817) [hereinafter "BENTELE"] (or DE 195 20 443 [hereinafter "DE '443'"]) in view of EP 752,495 [hereinafter "EP '495'"]. The Examiner has indicated that no patentable weight was given to the last paragraph of claim 1, which she considered to recite process limitations.

By the present amendment, independent claim 1 has been amended to even more clearly structurally define the features of the instant invention. In particular, independent claim 1, as now

amended, recites, *inter alia*, a pressure fluid line arranged to generate internal pressures by the at least one first support element on the flexible press belt of the shoe press unit and by the at least one second support element on the roll jacket of the counter roll, and an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll. Further, Applicants' independent claim 33 recites, *inter alia*, adjusting a pressure differential between internal pressures generated by the at least one first support element acting on the flexible press belt, and the at least one second support element acting on the roll jacket, where the pressure differential is adjusted by adjusting the pressure of the fluid supplied to the at least one first support unit and the at least one second support unit. Applicants submit that BENTELE fails to disclose at least the above-noted features of the instant invention.

While BENTELE discloses throttles 13 located between the common fluid pressure line 12 and each support element, these throttles are provided to ensure a greater pressing pressure being applied at the press roll 3 than at the backing roll 8. In this way, shell 9 of backing roll 8 sags downwardly in its axial central region. However, BENTELE fails to disclose or suggest the specifics of throttles 13, and certainly fails to disclose or suggest any information with regard to adjustability. Thus, Applicants submit that BENTELE fails to disclose or suggest, *inter alia*, an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll, as recited in at least independent

claim 1, as now amended, and fails to disclose or suggest, *inter alia*, adjusting a pressure differential between internal pressures generated by the at least one first support element acting on the flexible press belt, and the at least one second support element acting on the roll jacket, where the pressure differential is adjusted by adjusting the pressure of the fluid supplied to the at least one first support unit and the at least one second support unit, as recited in at least independent claim 33.

Moreover, as BENTELE discloses only that the throttles are provided to produce a specific sag in shell 9, Applicants submit that BENTELE fails to disclose or suggest any motivation or rationale to lead one ordinarily skilled in the art to modify BENTELE so as to include an adjustment device to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll, as recited in at least independent claim 1, as now amended, and/or to adjust a pressure differential between internal pressures generated by the at least one first support element acting on the flexible press belt, and the at least one second support element acting on the roll jacket, where the pressure differential is adjusted by adjusting the pressure of the fluid supplied to the at least one first support unit and the at least one second support unit, as recited in at least independent claim 33.

Accordingly, Applicants submit that BENTELE fails to disclose or suggest the combination of features recited in at least independent claim 1, as now amended, and in independent claim 33. Moreover, Applicants submit that BENTELE fails to disclose or suggest the requisite motivation or rationale for modifying BENTELE in any manner which would render unpatentable the invention as recited in at least independent claim 1, as now amended, and in independent claim 33.

Further, Applicants submit that claims 2 - 24 and 26 - 32 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that BENTELE fails to disclose or suggest, in combination, the at least one first support element being pressure fluid-actuated, as recited in claim 2; the at least one second support element being pressure fluid-actuated, as recited in claim 3; the fibrous material web comprising at least one of a paper web and a cardboard web, as recited in claim 4; a line force differential between the shoe press unit and the counter roll being changeable with the pressure differential, as recited in claim 5; a cross-section of the pressure differential being produced lateral to the web travel direction, the cross-section of the pressure differential being changeable so different pressure differentials are adjustable over the width, as recited in claim 6; the line force in the roll nip changeable by way of the pressure differential, as recited in claim 7; line forces that are at least essentially even being adjusted in the roll nip by way of the variable pressure differential, as recited in claim 8; one of the pressure differential and the line force differential being continuously changeable in areas, as recited in claim 9; the internal pressure produced by the at least one first support element being changeable to change the pressure differential, as recited in claim 10; the internal pressure produced by the at least one second support element being changeable to change the pressure differential, as recited in claim 11; both the internal pressure produced by the at least one first support element and the internal pressure produced by the at least one second support element being changeable to change the pressure differential, as recited in claim 12; the at least one first support element and the at least one second support element being connected to the common pressure fluid line, the adjustment device

comprising the adjustable pressure reduction device provided in at least one of the pressure fluid connection between the common pressure fluid line and the at least one first support element, and the pressure fluid connection between the common pressure fluid line and the at least one second support element, the pressure differential being changeable by the adjustable pressure reduction device, as recited in claim 13; at least one of the at least one first support element and the at least one second support element being connected to the common pressure fluid line one of individually, in groups, and all together, as recited in claim 14; the adjustable pressure reduction device being provided between at least one of the groups of the at least one second support element and the common pressure fluid line, thereby reducing the pressure of the at least one second support element connected to the common pressure fluid line in groups, as recited in claim 15; the adjustable pressure reduction device being provided between at least one individual at least one second support element and the common pressure fluid line, thereby reducing the pressure of the at least one second support element individually connected to the common pressure fluid line, as recited in claim 16; the adjustable pressure reduction device including at least one variably adjustable valve, as recited in claim 17; at least one of the pressure differential and the line force differential being externally adjustable, as recited in claim 18; at least one of the pressure differential and the line force differential being adjustable by one of mechanically, hydraulically, pneumatically, manually, by remote control, at the site, from a control position, and in a process-guided manner, as recited in claim 19; the pressure differential being adjustable as a function of a line force in the roll nip by predeterminable characteristic curves, as recited in claim 20; the pressure differential being adjustable as a function of line force correction procedures for the roll nip, wherein the line force

correction procedures may be at least one of input by way of an electronic control and produced by way of corresponding signals of a process guidance system, as recited in claim 21; the pressure differential being adjustable by way of a regulating system that includes at least one closed regulation loop, as recited in claim 22; a line force in a second roll nip formed between the third roll and a fourth roll being changeable by way of the pressure differential, as recited in claim 23; at least one of the counter roll and the third roll being cambered, as recited in claim 24; the shoe press unit comprising a shoe press roll and the flexible press belt, the flexible press belt comprising a flexible press jacket, as recited in claim 26; the shoe press unit disposed above the counter roll, as recited in claim 27; the ends of the roll jacket of the counter roll being supported on the relevant carrier so that the roll jacket cannot move radially, as recited in claim 28; an action plane of the at least one second support element of the counter roll inclined slightly in relation to a second action plane of the at least one first support element of the shoe press unit, wherein an inclination angle lies in a range from about 2° to 15°, as recited in claim 29; the inclination angle lies in a range from about 4° to 8°, as recited in claim 30; an action plane of the at least one second support element of the counter roll coinciding, at least essentially, with a second action plane of the at least one first support element of the shoe press unit, as recited in claim 31; comprising pressure-active surfaces of the at least one second support element being not equal to second pressure-active surfaces of the at least one first support element of the shoe press unit, as recited in claim 32.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1 - 24 and 25 - 33 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

2. Over Bentele in view of Smook

Applicants traverse the rejection of claim 25 under 35 U.S.C. § 103(a) as being unpatentable over BENTELE in view of SMOOK.

Applicants note that SMOOK fails to disclose or suggest the subject matter noted above as deficient in BENTELE, and fails to disclose or suggest the necessary motivation or rationale for modifying BENTELE in the manner asserted by the Examiner. In particular, SMOOK fails to disclose or suggest, *inter alia*, an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll, as recited in at least independent claim 1, as now amended.

Moreover, SMOOK fails to disclose or suggest any subject matter which would provide the requisite motivation or rationale to modify BENTELE in the manner asserted by the Examiner. That is, because SMOOK fails to disclose or suggest at least the above-noted subject matter, Applicants submit that it would not have been obvious to modify BENTELE to include an adjustment device, as recited in at least independent claim 1, as now amended.

Further, Applicants submit that claim 25 is allowable at least for the reason that it depends from allowable base claims and because recites additional features that further define the present invention. In particular, Applicants submit that no proper combination of BENTELE and SMOOK discloses or suggests, in combination, the third roll, the fourth roll, and the counter roll being cambered, as recited in claim 25.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of

claim 25 and indicate that this claim is allowable.

3. Over DE '443 in view of EP '495

Applicants traverse the rejection of claims 1 - 24 and 26 - 33 under 35 U.S.C. § 103(a) as being unpatentable over DE 195 20 443 [hereinafter "DE '443"] in view of EP 752,495 [hereinafter "EP '495"]. Applicants note that DE '443 is a German patent family member of BENTELE discussed above. Thus, Applicants submit that DE '443 suffers from the same deficiencies disclosed above in BENTELE. In particular, DE '443 fails to disclose or suggest, *inter alia*, an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll, as recited in at least independent claim 1, as now amended, and fails to disclose or suggest, *inter alia*, adjusting a pressure differential between internal pressures generated by the at least one first support element acting on the flexible press belt, and the at least one second support element acting on the roll jacket, where the pressure differential is adjusted by adjusting the pressure of the fluid supplied to the at least one first support unit and the at least one second support unit, as recited in at least independent claim 33.

Applicants note that EP '495 discloses a shoe press device and that the pressure of the support elements should be approximately alike. Further, EP '495 discloses a pressure reduction valve 28 to adjust the pressure to compensate for the weight of the roll jacket. Moreover, EP '495 discloses additional pressure controls coupled to press shoes having different dimensions than the main shoe presses, i.e., at the edge regions. These controls are provided to reduce the pressure to

the reduced sized shoes so that a uniform pressure is produced.

Thus, Applicants note that neither the pressure reduction valve nor the pressure controls of EP '495 disclose or suggest, *inter alia*, fails to disclose or suggest, *inter alia*, adjusting a pressure differential between internal pressures generated by the at least one first support element acting on the flexible press belt, and the at least one second support element acting on the roll jacket, where the pressure differential is adjusted by adjusting the pressure of the fluid supplied to the at least one first support unit and the at least one second support unit, as recited in at least independent claim 33. Therefore, Applicants further submit that EP '495 fails to disclose or suggest, *inter alia*, an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll, as recited in at least independent claim 1, as now amended.

Therefore, Applicants submit that no proper combination of DE '443 and EP '495 discloses or suggests the combination of features recited in at least independent claim 1, as now amended, and in independent claim 33.

Still further, Applicants submit that neither of the above-discussed devices of EP '495 are disclosed to ensure a desired sag of the roll jacket. Thus, Applicants submit that the applied documents fail to disclose or suggest the necessary motivation or rationale for modifying the throttle of DE '443 for either of the disclosed devices of EP '495. In view of the foregoing, Applicants submit that the asserted combination of DE '443 and EP '495 is improper and should be withdrawn.

Further, Applicants submit that claims 2 - 24 and 26 - 32 are allowable at least for the reason

that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that no proper combination of DE '443 and EP '495 discloses or suggests, in combination, the at least one first support element being pressure fluid-actuated, as recited in claim 2; the at least one second support element being pressure fluid-actuated, as recited in claim 3; the fibrous material web comprising at least one of a paper web and a cardboard web, as recited in claim 4; a line force differential between the shoe press unit and the counter roll being changeable with the pressure differential, as recited in claim 5; a cross-section of the pressure differential being produced lateral to the web travel direction, the cross-section of the pressure differential being changeable so different pressure differentials are adjustable over the width, as recited in claim 6; the line force in the roll nip changeable by way of the pressure differential, as recited in claim 7; line forces that are at least essentially even being adjusted in the roll nip by way of the variable pressure differential, as recited in claim 8; one of the pressure differential and the line force differential being continuously changeable in areas, as recited in claim 9; the internal pressure produced by the at least one first support element being changeable to change the pressure differential, as recited in claim 10; the internal pressure produced by the at least one second support element being changeable to change the pressure differential, as recited in claim 11; both the internal pressure produced by the at least one first support element and the internal pressure produced by the at least one second support element being changeable to change the pressure differential, as recited in claim 12; the at least one first support element and the at least one second support element being connected to the common pressure fluid line, the adjustment device comprising the adjustable pressure reduction device provided in at least one of the pressure fluid

connection between the common pressure fluid line and the at least one first support element, and the pressure fluid connection between the common pressure fluid line and the at least one second support element, the pressure differential being changeable by the adjustable pressure reduction device, as recited in claim 13; at least one of the at least one first support element and the at least one second support element being connected to the common pressure fluid line one of individually, in groups, and all together, as recited in claim 14; the adjustable pressure reduction device being provided between at least one of the groups of the at least one second support element and the common pressure fluid line, thereby reducing the pressure of the at least one second support element connected to the common pressure fluid line in groups, as recited in claim 15; the adjustable pressure reduction device being provided between at least one individual at least one second support element and the common pressure fluid line, thereby reducing the pressure of the at least one second support element individually connected to the common pressure fluid line, as recited in claim 16; the adjustable pressure reduction device including at least one variably adjustable valve, as recited in claim 17; at least one of the pressure differential and the line force differential being externally adjustable, as recited in claim 18; at least one of the pressure differential and the line force differential being adjustable by one of mechanically, hydraulically, pneumatically, manually, by remote control, at the site, from a control position, and in a process-guided manner, as recited in claim 19; the pressure differential being adjustable as a function of a line force in the roll nip by predeterminable characteristic curves, as recited in claim 20; the pressure differential being adjustable as a function of line force correction procedures for the roll nip, wherein the line force correction procedures may be at least one of input by way of an electronic control and produced by

way of corresponding signals of a process guidance system, as recited in claim 21; the pressure differential being adjustable by way of a regulating system that includes at least one closed regulation loop, as recited in claim 22; a line force in a second roll nip formed between the third roll and a fourth roll being changeable by way of the pressure differential, as recited in claim 23; at least one of the counter roll and the third roll being cambered, as recited in claim 24; the shoe press unit comprising a shoe press roll and the flexible press belt, the flexible press belt comprising a flexible press jacket, as recited in claim 26; the shoe press unit disposed above the counter roll, as recited in claim 27; the ends of the roll jacket of the counter roll being supported on the relevant carrier so that the roll jacket cannot move radially, as recited in claim 28; an action plane of the at least one second support element of the counter roll inclined slightly in relation to a second action plane of the at least one first support element of the shoe press unit, wherein an inclination angle lies in a range from about 2° to 15°, as recited in claim 29; the inclination angle lies in a range from about 4° to 8°, as recited in claim 30; an action plane of the at least one second support element of the counter roll coinciding, at least essentially, with a second action plane of the at least one first support element of the shoe press unit, as recited in claim 31; comprising pressure-active surfaces of the at least one second support element being not equal to second pressure-active surfaces of the at least one first support element of the shoe press unit, as recited in claim 32.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1 - 24 and 25 - 33 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

2. Over DE '443 in view of Smook

Applicants traverse the rejection of claim 25 under 35 U.S.C. § 103(a) as being unpatentable

over DE '443 in view of SMOOK. Because claim 25 depends from independent claim 1, Applicants assume that the Examiner intended the instant rejection to also include EP '495, which was utilized in the Examiner's rejection of at least independent claim 1. Accordingly, this rejection has been addressed according to the above-noted understanding.

Applicants note that SMOOK fails to disclose or suggest the subject matter noted above as deficient in the asserted combination of DE '443 and EP '495, and fails to disclose or suggest the necessary motivation or rationale for rendering the asserted combination of DE '443 and EP '495 proper under 35 U.S.C. § 103(a). In particular, SMOOK fails to disclose or suggest, *inter alia*, an adjustment device arranged to change a pressure differential between the internal pressures generated by the at least one first support element acting on the flexible press belt of the shoe press unit, and the at least one second support element acting on the roll jacket of the counter roll, as recited in at least independent claim 1, as now amended.

Moreover, SMOOK fails to disclose or suggest any subject matter which would provide the requisite motivation or rationale to properly modify DE '443 in view the disclosure of EP '495. That is, because SMOOK fails to disclose or suggest at least the above-noted subject matter, Applicants submit that it would not have been obvious to combine DE '443 and EP '495 in the manner asserted by the Examiner, and that no proper combination of these documents can render unpatentable the features recited in at least independent claim 1, as now amended.

Further, Applicants submit that claim 25 is allowable at least for the reason that it depends from allowable base claims and because recites additional features that further define the present invention. In particular, Applicants submit that no proper combination of DE '443, EP '495, and

SMOOK discloses or suggests, in combination, the third roll, the fourth roll, and the counter roll being cambered, as recited in claim 25.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 25 and indicate that this claim is allowable.

Newly Submitted Claim is Allowable

Applicants submit that new submitted claim 34 is allowable over the art of record at least for the reason that it depends from allowable base claims and because recites additional features that further define the present invention. In particular, Applicants submit that no proper combination of the applied documents of record disclose or suggest, *inter alia*, a control device coupled to the adjustment device, wherein the control device is adapted to adjust the adjustment device, as recited in claim 34.

Accordingly, Applicants request that the Examiner consider the merits of new claim 34 and indicate that this claim is allowable.

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

CONCLUSION

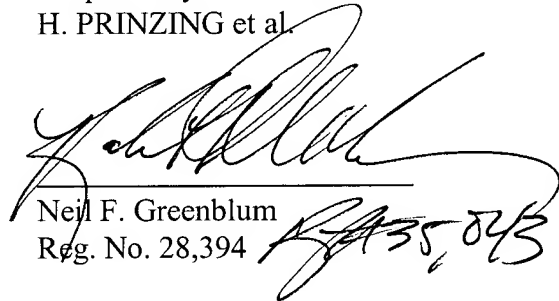
In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 1 - 34. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

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Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,
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